

	Dates of Limiting Observations.	No. of Rotations.	Period.		
			h	m	s
1882	July 29-1883 May 4	674	9	55	39 <sup>1</sup>
1883	Aug. 23-1884 June 12	710	9	55	39 <sup>1</sup>
1884	Sept. 21-1885 July 8	700	9	55	39 <sup>2</sup>

As far as the observations have already progressed during the present opposition, I find the period  $9^h 55^m 40^s \cdot 3$  from 174 rotations, but the interval of 72 days is too short for good results.

As to the new red spot, so frequently observed during the last opposition and following the old spot  $1^h 48^m (=65^\circ \cdot 3)$  in the same latitude, I looked for it most carefully before sunrise on January 5, but failed to recover it. It has either disappeared altogether or become extremely faint, like the belt on which it is projected.

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*Note on the Biela Meteors.* By Richard A. Proctor.

At the last meeting of the Society a remark was made to the effect that the radiation of the Biela meteors from an area, instead of a point, might be regarded as affording evidence in favour of a theory propounded by an anonymous writer in the *Times*, who, in an essay on comets and meteors, had maintained that the Biela meteors were probably ejected from the earth. As the author of the article in question, I desire to point out that it has never occurred to me to regard the meteors following Biela's comet as earth-born bodies. I have never heard of anyone who has suggested that they may have been so; nor can I imagine that any astronomer of repute would fail to recognise the overwhelming objections against such a theory. The article referred to definitely mentioned the Biela meteors as probably sprung from Jupiter.

The wide area of the radiant region, by the way, is no new phenomenon. It is interesting as showing how untenable is the belief that a radiant region of small area—not more than two degrees in diameter, for example—can safely be assigned to meteors having the so-called stationary radiants. So soon as the radiant regions of these systems come to be dealt with by several observers, it will be found that they are much larger than has been supposed. All occasion for the assumption of very great velocities will then disappear; nor need the laws of geometry be rejected for the sake of stationary radiant regions, as distinguished from radiant points.

The wide area appears to me to be unquestionably due to changes of direction caused by atmospheric resistance. If this affects meteors falling at the same time in originally parallel streams on the same region of our air, much more must it affect meteors falling in different months.

*Barrow-in-Furness:*

1886, January 6.

*Observations of the Meteors of 1885, November 27, made at the Radcliffe Observatory, Oxford. By W. H. Robinson.*

(Communicated by E. J. Stone, M.A., F.R.S.)

At 6<sup>h</sup> 0<sup>m</sup> P.M. (G.M.T.) great numbers of meteors were observed to be falling, and from comparison with subsequent observations in evening it was inferred that they were thicker about 6.30 than later. But clouds prevailed, more or less, in parts of the sky nearly all the evening.

About 7<sup>h</sup> 0<sup>m</sup> the sky was fairly clear, but at 8<sup>h</sup> 45<sup>m</sup> thickly overcast.

At 6<sup>h</sup> 30<sup>m</sup>, facing South: the meteors appeared to be falling in parallel lines, like the tracks of rain drops. Estimated that they were cutting parallels of Declination at about angles of 45°; but in order to secure greater accuracy reference was made to the stars, and here it was found that the direction was invariably from *α Andromedæ* to *α Pegasi*. Facing North: the meteors were all showering in one direction, as noticed in S., and here it was estimated that the general path formed with the meridian (*sub polo*) an angle of 30°, or more accurately, as ascertained at

7<sup>h</sup> 23<sup>m</sup>, from *Polaris* through a point half way between *ε* and *ζ Ursæ Majoris*. They were seldom 1<sup>s</sup> in duration, generally 0<sup>s</sup>.5 or less, and the usual length of path was between 5° and 10°. The meteors were fairly uniform in brightness, and equal to the brightest stars in *Ursa Major*, or about the second magnitude. Some were equal to *α Lyrae*, and many fainter than third magnitude. Did not notice any as bright as *Venus*, although specially watching for them.

6<sup>h</sup> 42<sup>m</sup>. Nearly overcast.

6<sup>h</sup> 45<sup>m</sup>. Breaks in N.E. Meteors still falling fast, and often visible through cloud when no stars appeared.

7<sup>h</sup> 0<sup>m</sup>. Sky clearing. In the W.S.W. the meteors were falling in the direction *α* to *δ Aquilæ*.

7<sup>h</sup> 33<sup>m</sup>. Facing East: appeared to be falling in the Prime Vertical.

7<sup>h</sup> 45<sup>m</sup>. Facing West: here also running down the Prime Vertical; clouding.

8<sup>h</sup> 15<sup>m</sup>. A clear patch in E. Meteors evidently becoming fewer here.

8<sup>h</sup> 30<sup>m</sup>. Clear in places. From south side of Observatory: noticed they were still falling rather fast, average